

I claim:

1.

1 A rotary throttle valve carburetor having a body defining a fuel-and-air
2 mixing passage and a cylindrical valve chamber, the fuel-and-air mixing passage
3 communicating through the body, the valve chamber extended downward from a top
4 surface of the body communicating transversely through the mixing passage, a rotary
5 throttle fitted rotatably and axially movably into the valve chamber, the rotary throttle
6 having a throttle hole and a throttle shaft, the throttle hole adjustably aligning to the fuel-
7 and air mixing passage, the throttle shaft projected upward from the valve chamber
8 through the top surface of the body, a throttle lever engaged to and disposed transversely
9 of the throttle shaft, the throttle lever having a downward facing cam surface, a fuel
10 nozzle in communication with said throttle hole and a fuel metering chamber disposed on
11 the bottom wall of the carburetor body, and a needle supported on said rotary throttle is
12 fitted in said fuel nozzle to regulate an opening degree of a nozzle hole, the rotary
13 throttle valve carburetor comprising:

14 a lid plate engaged to the top surface of the carburetor body, the lid plate
15 having a base portion and an annular shoulder, the base portion having a hole centered
16 above the valve chamber, the throttle shaft projecting upward through the hole of the
17 base portion, the annular shoulder projecting upward from the base portion and disposed
18 concentrically to and spaced radially outward from the hole of the base portion;

19 a circular seal disposed radially between the annular shoulder of the lid
20 plate and the throttle shaft;

21 a bracket, the base portion of the lid plate juxtaposed between the
22 carburetor body and the bracket, the bracket disposed radially outward from the annular

23 shoulder of the lid plate, the bracket having a cam follower engaged operatively to the
24 downward facing cam surface of the throttle lever; and

25 a plurality of spacers juxtaposed between the carburetor body and the
26 bracket and bearing on the bracket to axially locate the bracket relative to the carburetor
27 body.

2.

1 The carburetor as set forth in claim 1 further comprising a resilient seal
2 juxtaposed between the top surface of the carburetor body and the base portion of the lid
3 plate, the resilient seal encircling the throttle hole.

3.

1 The carburetor as set forth in claim 2 further comprising:
2 the carburetor body defining a recessed annular shelf and a cylindrical
3 wall extending downward from the top surface to an outer perimeter of the annular shelf,
4 the annular shelf disposed concentrically about the throttle hole; and
5 the lid plate having a lower annular shoulder projecting downward from
6 the base portion past the top surface and toward the annular shelf of the carburetor body,
7 the lower annular shoulder close fitted to the cylindrical wall of the carburetor body.

4.

1 The carburetor as set forth in claim 3 wherein the upward facing cam
2 follower of the bracket is a pin protruding radially inward toward the throttle shaft from a
3 cylinder engaged rigidly to the bracket.

5.

1 The carburetor as set forth in claim 4 wherein the pin is constructed and
2 arranged to rotate within the cylinder, the pin thereby rolling across the cam surface of
3 the throttle lever as the rotary throttle rotates.

6.

1 The carburetor as set forth in claim 4 wherein the top surface of the
2 carburetor body defines a circular groove disposed concentrically about the throttle hole,
3 and wherein the resilient seal is an O-ring seated within the circular groove.

7.

1 The carburetor as set forth in claim 6 wherein the bracket, the cylinder,
2 the pin, the plurality of spacers and the carburetor body are metallic and the lid plate is
3 plastic.

8.

1 The carburetor as set forth in claim 7 wherein the circular seal has a
2 resilient member engaging the throttle shaft and a reinforcement metallic sleeve
3 engaging the lid plate.

9.

1 The carburetor as set forth in claim 8 wherein the plurality of spacers are
2 unitary to the carburetor body.

10.

1 The carburetor as set forth in claim 9 further comprising a plurality of
2 fasteners, each one of the plurality of fasteners engaging a respective one of the spacers
3 to the bracket.

11.

1 The carburetor as set forth in claim 10 wherein the plurality of fasteners
2 are bolts engaged threadably to the carburetor body through the bracket and each
3 respective one of the plurality of spacers.

12.

1 The carburetor as set forth in claim 11 wherein the bracket is diecast-
2 molded of a metal selected from the group consisting of an aluminum alloy and a zinc
3 alloy.

13.

1 The carburetor as set forth in claim 12 wherein the base portion of the lid
2 plate has a plurality of notches, each one of the plurality of notches indexing about each
3 respective one of the plurality of spacers of the carburetor body.